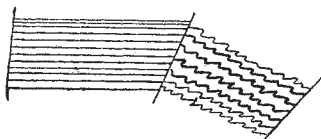


In the same way let black represent *sand* strata, and let red represent *succession* in such strata; then the sandstones will be represented by *browns*, the oldest being the blackest, and the newest the reddest brown.

3. Let igneous rocks be represented by a general colour, as red, and let any order which obtains among them (succession, for example, if succession can be traced) be marked by doses of another colour, as yellow; then the igneous rocks will be all red or orange, the newest being the yellowest.

4. Let other differences (as mineralogical differences) be represented by other means, as by *hatching*. Thus granite and quartz rock, if contemporaneous, may be marked by red with the addition of lines—



According to these principles the English strata would be represented by the following colours, which may thus be denoted by letters; let Red, Yellow, Blue, Black, be marked by R, Y, B, A, and let mixtures be represented by combinations of the letters. Then we have—

Orange, R R R Y, R R Y, R Y, R Y Y, R Y Y Y.
 Green, Y Y Y B, Y Y B, Y B, Y B B, Y B B B.
 Purple, B B B R, B B R, B R, B R R, B R R R.
 Brown, A R R R, A R R, A R, R A A, R A A A.
 Unstratified rocks (primary), R.
 (trap), R R Y, R Y, R Y Y, &c.
 Clay slate, B R.
 Oldest limestone, B, B B B Y, B B Y.
 Oldest sandstone, A, A A A R, A A R.
 Secondary limestone (Mountain), B Y.
 New red sandstone, A R.
 Oolites, B Y Y, B Y Y Y.
 Green sand, A R R.
 Chalk, B Y Y Y Y.

Observations.—1. The method here proposed would answer the objects above stated, for the material and order of succession are marked by their proper colours; and the sands, clays, and limestones which occur near each other would be very distinct. Thus the green sand is reddish brown (A R R) and the chalk is yellow green (B Y Y Y Y).

2. Perhaps it may appear an inconvenience that contiguous members of a formation of the same material are proximate shades of the same colour: thus the oolite beds would be successive shades of green (B Y Y, B Y Y Y), and might be difficult to distinguish. I answer, that the beds themselves are often difficult to distinguish, so that our language is most indistinct when our knowledge is most indistinct; again, that the inconvenience, when it is one, may be remedied by marking or hatching those strata; again, that no systematic method can be devised which will not be open to this objection.

3. The above principles being adopted, the whole range of the colours, as modified by the *succession-colour*, might be different according to the different object of the geologist. Thus if he had to exhibit the whole geology of England, all limestones whatever must come in between B and Y (Blue and Yellow). But if he take the secondary period only, he may use all the possible shades of green for members of that part of the series alone, and may thus make his terms more numerous.

4. If the *whole* range of the *succession-colour* be employed and exhausted on a *part* only of the geological series of strata, the strata which occur beyond this part will, in the scale used on such occasions, be without representative colours. This is an inevitable evil. We cannot combine the extremes of detail and generality.

If we use all our means in expressing a part, we must for the time omit to express the remainder. We must do this when our purpose requires and justifies it.

5. When we use all our colours for part of the geological series, we still preserve the principles above proposed and the advantages which they secure, namely, that the material and the succession are both exhibited in an intelligible way without reference to the index.

6. If we thus make a part of the geological succession to occupy the whole power of our successive colour, we have different colours from those which we have when we represent the whole succession. The partial map has a different index from the general one. This is a serious evil, and must not be incurred without strong necessity.

7. It may be mentioned as an advantage of the proposed notation that many of the colours which are used in it agree very nearly with colours commonly used: as red for granite, blue for older limestones, yellow, or yellow-green for chalk, brown for some sandstones, purple for clays. The main novelties are that the oolites are green, and the coal-fields not black; but as to the latter point, query, whether a coal stratum be a proper geological distinction? If the coal-measures be sand or clay beds, they should be brown or purple, according to the material which is taken as characteristic.

In a given case we may have to determine the question above suggested, whether we should employ the whole range of our succession colours on a limited geological period, as, for example, the transition-period. In order to decide this consider what you want. How many limestones have you? How many sandstones, how many clay-rocks, which are to be distinguished? If the oldest limestone be pure blue, and mountain limestone pure green (B Y), we can easily interpose three or four limestones, as (B B B B Y, B B B Y, B B Y); is this a sufficient number of terms for you? and so of the rest.

Summary.—Let there be in all cases a *material colour* and a *succession colour*, namely—

	Material.	Succession.	
Limestone	B	Y	(Green)
Sandstone (black) ...	A	R	(Brown)
Clay	R	B	(Purple)
Igneous Rocks	R	Y	(Orange)

The latter two lines lead to no confusion, for though R in the clays indicates the material, it is never to be used without B, and R in igneous rocks is never used with B.

It may be observed that in the preceding scheme I have not exhausted the power of colour, for I have not used either the combinations of *black with blue* or of *black with yellow*, or the combination of *three simple colours*.
W. W.

Dublin, August 17, 1835

NOTES

WE are glad to learn that the Italian Government has decided on having a deep-sea expedition in the course of this summer to explore the Mediterranean. The necessary arrangements are now being made by Prof. Giglioli, the eminent zoologist, at Florence, who will take charge of the biological part of the work. Capt. Magnaghi will be intrusted with the physical part of the work, as well as with the command of the vessel. The scientific results may be expected to be of especial interest, because nothing has been done to explore the depths of the Mediterranean beyond the short cruise in H.M.S. *Porcupine* in 1870.

PROF. TYNDALL has written to the *Times* of yesterday a letter of great interest on the attitude of the late Mr. Carlyle towards modern science, which it has been taken for granted was purely hostile. But according to Prof. Tyndall, not only was Mr. Carlyle deeply interested in some of the latest researches of science, but he took great and successful pains to understand

them, and was even open to accept some of the latest developments of scientific thought. At first, for example, his attitude to Darwinism was decidedly hostile, but later on, Prof. Tyndall states, "he approved cordially of certain writings in which Mr. Darwin's views were vigorously advocated, while a personal interview with the great naturalist caused him to say afterwards that Charles Darwin was the most charming of men."

WE learn from the *American Naturalist* that a proposal will be made at the next meeting of the American Association to invite the British Association to hold its meeting in 1883 in America in conjunction with its American sister. The proposal deserves consideration.

ACCORDING to the *Frankfurter Zeitung*, at Nakkoo, in the Island of Lapland, an eagle was shot on the 15th ult., which measured $6\frac{1}{2}$ feet between the tips of the wings. Round its neck it had a brass chain to which a little tin box was fastened. The box contained a slip of paper on which was written in Danish, "Caught and set free again in 1792 by N. and C. Andersen.—Boetod in Falster, Denmark."

WE regret to learn that the printing of the "International Bulletin" issued by the U.S. Signal Office will hereafter be twelve months after date, instead of six months as at present. This seems to us a step backwards from the energetic and liberal policy of the late General Myer.

PROF. GEGENBAUR, the well-known Heidelberg comparative anatomist, is said to be dangerously ill with blood-poisoning, contracted while dissecting.

THE Davis Lectures for 1881 will be given in the lecture-room in the Zoological Society's Gardens in the Regent's Park, on Thursdays at 5 p.m., commencing June 16. The following are the subjects and lectures:—June 16, Whales, Prof. Flower, F.R.S.; June 23, Dolphins, Prof. Flower, F.R.S.; June 30, Extinct British Quadrupeds, Mr. J. E. Harting; July 7, The Limbs of Birds, Prof. W. K. Parker, F.R.S.; July 14, Birds Ancient and Modern, Mr. W. A. Forbes; July 21, Zoological Gardens, Dr. P. L. Sclater, F.R.S.; July 28, Chameleons, Prof. Mivart, F.R.S. These lectures will be free to Fellows of the Society and their friends, and to other visitors to the Gardens.

AT the fifty-second anniversary of the Zoological Society the report of the Council on the proceedings of the Society during the past year was read by Mr. Sclater, F.R.S., the Secretary. It stated that the number of Fellows on December 31, 1880, was 3309 against 3364 at the same date of the previous year, 153 new Fellows having been elected, and 208 removed by death or other causes during the year. The total receipts for 1880 had amounted to 27,388*l.* against 26,463*l.* for 1879. The ordinary expenditure for 1880 had been 24,753*l.*, and the extraordinary expenditure 1825*l.*, besides which the sum of 1000*l.* had been devoted to the repayment of part of the mortgage-debt due on the Society's freehold premises, which had thus been reduced to 7000*l.* This had left a balance of 879*l.* to be carried forward for the benefit of the present year. The total assets of the Society on December 31 last were estimated at 27,852*l.*, and the liabilities at 9078*l.* Amongst the works carried out in the Society's Gardens in 1880 were specially noticed the completion of the insectarium (which had just been opened to the public, and contained a collection of living insects), and the thorough repair and reconstruction of the parrot-house. The number of visitors to the Society's Gardens in 1880 had been 675,979, against 643,000 in 1879. The zoological lectures having been well attended during the past year, would be continued during the present season. The number of animals in the Society's collection on December 31 last was 2372, of which 703 were

mammals, 1438 birds, and 231 reptiles. Special attention was called to the increasing number of presents to the menagerie received by the Society of late years, the number thus acquired having now so increased as to usually exceed the number of those obtained by purchase. Col. J. A. Grant, C.B., F.R.S., Dr. Günther, F.R.S., Prof. Newton, F.R.S., Osbert Salvin, F.R.S., and the Right Hon. George Sclater Booth, M.P., were elected new Members of Council. Prof. W. H. Flower, LL.D., F.R.S., was re-elected President, Mr. Robert Drummond, Treasurer, and Mr. Philip Lutley Sclater, M.A., Ph.D., F.R.S., Secretary to the Society.

A NEWLY issued part of the Annals of the "Museo Civico" of Genoa is devoted to a memoir by Dr. Peters and Marquis G. Doria on the Mammals of New Guinea and the adjoining Papuan Islands, procured during the recent researches of Beccari, D'Albertis and Bruijn. In the collection amassed by these ardent explorers fifty-seven species are represented, amongst which are twenty-two Marsupials, nineteen Bats, and thirteen Rodents; *Sus papuensis*—an introduced species—was the only Ungulate met with. It will be seen, therefore, that, as in Australia, the Mammal-fauna of the Papuan sub-region may be said to consist nearly entirely of Marsupials, Bats, and Rodents. Its affinity to Australia is further shown by the presence of a Monotreme (*Tachyglossus bruijnii*), and by the occurrence of such genera as *Macropus*, *Dasyurus*, and *Dromicia*. The memoir is illustrated by eighteen excellent plates.

MR. THISELTON DYER writes to the *Daily News* in reference to a suggestion "that the labels of ferns, flowering and other plants in Kew Gardens should bear not only scientific but popular names." Mr. Dyer states that as far as such popular names can be ascertained they are carefully indicated on the Kew labels. "There is some misapprehension," Mr. Dyer states, "about the popular names of plants. Your correspondent seems to have proceeded on the assumption that there is a popular botanical nomenclature co-extensive with the scientific. This is very far indeed from being true even of a vegetation so thoroughly investigated as that of the British Islands. Of the plants of foreign (especially tropical) countries it is obviously, with the exception of some useful or medicinal plants, not true at all. But, as you will observe from the accompanying copy of the popular guide to the Royal Gardens, where anything like a genuine popular name exists, great prominence is given to it at Kew. . . . The popular tongue is by no means ready in finding acceptable names for the foreign plants of our gardens, and is quite content to accept from botanists *Dahlia*, *Petunia*, *Phlox*, *Pelargonium*, *Gladiolus*, *Calceolaria*, and the like."

WE take the following from the May number of the *American Naturalist*:—The Kansas Academy of Science, at their November meeting, appointed a Commission to memorialise the Legislature in reference to a State Survey. Two preliminary surveys under Professors Mudge and Swallow have already been made. A more extended and thorough scientific survey is now needed. The most active geologist now in the field in this State is Prof. O. W. John, who for two years past has studied the stratigraphical geology of Eastern Kansas. Last summer Prof. F. H. Snow, with several assistants, spent over a month in Santa Fé Cañon, New Mexico, as well as in Colorado, and made important entomological collections; among them were twelve new species of coleoptera and an interesting collection of geometrid moths, comprising a number new to the Colorado plateau region. Prof. A. Hyatt, the curator of the Boston (U.S.) Society of Natural History, announces that a sea-side laboratory will be opened this year under his direction at Annisquam, Mass., three miles from Gloucester, from June 5 to September 15.

WE have received copies of handy and cheap guides to the New Natural History Museum; penny guides are furnished for

each of the departments, and a guide to the whole place costs only threepence. This is as it should be.

FROM Gustav Wolf, the Leipzig publisher, we have received a copy of a most useful "Naturwissenschaftlich-mathematisches Vademecum." The catalogue is really an index, both of subjects and authors, to all recent publications of importance in physical and natural science, and is likely to prove of real service to all scientific workers.

At the meeting on April 26 of the Institution of Civil Engineers, Mr. Walter R. Browne, M.A., M.Inst. C.E., read a paper on "The Relative Value of Tidal and Upland Waters in maintaining Rivers, Estuaries, and Harbours." The author, while declining to lay down any universal rule, held as a general principle that the main scouring agent was not the tidal but the low-water flow. This principle was supported by the following line of argument:—1. The silt, which tended to choke up tidal channels, was almost wholly due to the tidal water, and not to the fresh water. 2. The tidal water brought up more silt on the flow than it took down on the ebb; *i.e.*, on the whole it tended to choke the channel, not to scour it. 3. The low-water flow, if left to itself, scoured away the deposit and kept the channel open. 4. Hence it was concluded that where the two acted together, the scour must be due mainly, if not entirely, to the low-water flow, and not to the tidal flow. It was added that low-water scour was in its nature self-regulating, whilst tidal scour, if it once began, would tend to increase indefinitely. But the essential point was to discover the ratio of the bottom to the surface velocity under all possible circumstances, since it was obvious that the former alone had any scouring effect. Tables were given showing that the ratio of bottom to surface velocity diminished rapidly with an increase of depth; but their application to tidal channels was doubtful, because then the river, instead of being (in a theoretical point of view) indefinitely long, fell at a short distance into an estuary whose waters might be considered at rest. The author had conducted two series of experiments on the surface and bottom velocities of the River Avon, in the course of an ebb-tide. Both series of experiments showed that during the greater part of the ebb the bottom velocity was actually *nil*. When about two-thirds of the ebb was over, the bottom layers of water appeared to start into activity, and to assume a velocity about two-thirds of that at the surface. This is shown by the following extract from the tables:—

Position of meter.	Time after ebb began.	Depth of water.	Velocity.
	h. m.	ft. in.	feet per sec.
Surface	1 0 ...	22 8 ...	3.57
Bottom	1 10 ...	21 0 ...	0.00
Surface	1 53 ...	14 10 ...	4.60
Bottom	2 4 ...	13 6 ...	0.00
Surface	3 45 ...	5 8 ...	3.07
Bottom	3 54 ...	5 7 ...	1.91

The following conclusions were drawn from these and other experiments:—In the largest rivers the bottom velocity is for practical purposes the same as the surface velocity. In ordinary rivers the bottom velocity bears to the surface velocity a ratio which is about three-fourths at 5 feet depth, one-half at 15 feet, and one-third at 25 feet. In tidal channels, such as the Avon, during two-thirds of the ebb the slope of the surface is exceedingly small; and while the surface velocity is large the bottom velocity is *nil*. During this period no scour, but rather deposit, is going on. For the remainder of the ebb the conditions approximate to those of an ordinary river; scour does go on, but its amount is insufficient to sweep away the silt which has been deposited, not only at the top of the tide, but also during two-thirds of the ebb. Embankments had frequently proved beneficial rather than the reverse; a fact explained by the author's experiments, since the level of the ebb tide would in conse-

quence fall more rapidly, and the point at which the water at the bottom began to move would be reached at an earlier period. Again, the process called "dockising," or damming a river at its mouth, had frequently been condemned on account of supposed injury to the river itself, or even to the estuary in which it flowed, but, as would appear from this paper, without foundation. The results would exercise an important influence on other cases, both of theory and practice.

A SHOCK of earthquake is reported on the night of April 28 from Sicily and the province of Reggio di Calabria, and as far as Catanzaro and Monteleone.

WE learn that M. Alphaud, the Director of Public Works in Paris, has in his hands the tender of Siemens and Co. for constructing an electrical railway from the Place de la Concorde to the interior of the Electrical Exhibition. M. Alphaud has given his adhesion to the request, which will be sent with his recommendation to the Commission of Sewers appointed by the Municipal Council, that when the Exhibition shall be closed, the railway will be kept running in the Champs Elysees.

MR. PREECE has been spending a few days in Paris in order to report on the electric establishments and experiments which are being made in that city. He inspected the electric conductors of several large monuments, visited the telephonic exchanges, the Méritens factory, where are being built the magneto-electric engines ordered by the French Lighthouses Administration and the Trinity House, &c., &c.

THOSE interested in sanitary matters should see the Preliminary Report to the U.S. National Board of Health on the Relation of Soils to Health, in the supplement to the *Bulletin* of the Board for April 16. The special point reported on is the Filtering Capacity of Soils, by Messrs. R. Pumpelly and G. A. Smith.

A MEETING of the Yorkshire Geological and Polytechnic Society was held on April 27 at the Royal Institution, Hull, under the presidency of Mr. A. K. Rollit, J.L.D., F.R.A.S., &c., ex-president of the Hull Literary and Philosophical Society. There was a fair attendance, including representatives from several parts of Yorkshire. A brief introductory address on recent advances in physical science was made by Dr. Rollit, after which Mr. G. W. Lamplugh, F.G.S., read a paper on "The Peculiar Intermingling of Gravel and Boulder Clay in some Sections near Bridlington." Mr. J. W. Davis, F.G.S., hon. sec., then read and remarked upon papers by Mr. A. G. Cameron of H.M. Geological Survey, on "The Subsidence above the Permian Limestone between Hartlepool and Ripon," and Mr. J. E. Clark, B.A., on "A Deep Glacial Section at the Friends' Retreat at York." Dr. James Geikie, F.R.S., was present at the meeting, and made some observations on the subject of geology generally. In the afternoon the Society made a geological excursion to the east coast at Withernsea and to the gravel-pits at Kelsey Hill near Burstwick, at the former of which places Dr. Geikie delivered a geological address.

ABOUT twenty minutes to eleven on Monday night, owing some accident at present unexplained, the electric lights on the Brush system, one of the three with which experiments are at present being made in the City, were suddenly extinguished, leaving a large portion of the City in total darkness. The area over which the Brush light has been placed extends from Blackfriars Bridge, up Ludgate Hill, to St. Paul's Churchyard, and down Cheapside as far as Queen Street and King Street. Fortunately the old gas-lamps remain in their places while the electric light experiments are being made, and orders were quickly given for these to be lighted. Every attempt was made by those in charge of the Brush light to restore the connection, and for a

few minutes it seemed as though they had succeeded; but this only lasted for a very short time, and it was soon seen that something had gone hopelessly wrong.

THE following excursions have been arranged for by the Geologists' Association:—To Croydon, Shirley and the Addington Hills, May 7; to Grays, Essex, May 14; Sheppey, May 23.

MR. LANT CARPENTER asks us to state that in his article on Niagara in *NATURE*, vol. xxiii. p. 511, he attributed the article on the "Music of Niagara," in *Scribner's Magazine* for February, 1881, to Mr. Eugene Schuyler, whereas the author was Mr. Eugene Thayer, of Tremont Street, Boston, Mass.

THE additions to the Zoological Society's Gardens during the past week include a Silver Fox (*Canis fulvus*, var. *argentata*) from North America, presented by Mr. Robert Hunt L. B. Lydston Newman; a Vulpine Phalanger (*Phalangista vulpina*) from Australia, presented by Mrs. J. S. Henderson; a Goldfinch (*Carduelis elegans*), British, a Snow Bunting (*Plectrophanes nivalis*), European, presented by Mr. John Fletcher; an Eyed Lizard (*Lacerta ocellata*), South European, presented by Mr. James Wellford; an Indian Cobra (*Naia tripudians*) from India, presented by Mr. A. H. Jamrach; a Ludio Monkey (*Cercopithecus ludio*) from West Africa, on approval; two Humboldt's Lagothrix (*Lagothrix humboldti*), two Matamata Terrapins (*Chelys matamata*) from Upper Amazons, a Green-billed Toucan (*Ramphastos dicolorus*) from Guiana, three Saddle-billed Storks (*Xenorhynchus senegalensis*) from West Africa, three Roseate Spoonbills (*Platalea ajaja*) from South America, a Japanese Teal (*Querquedula formosa*) from North-East Asia, three Magellanic Geese (*Bernicla magellanica*) from the Falkland Islands, purchased; a Reeves' Muntjac (*Cervulus reevesi* ♂) born in the Gardens.

OUR ASTRONOMICAL COLUMN

THE INTRA-MERCURIAL PLANET QUESTION.—It may be remembered that when the late Prof. Watson claimed to have seen an unknown object near the star θ Cancri during the totality of the eclipse of July 29, 1878, it was objected with respect to his supposition as to its being an intra-Mercurial planet, that he had not anywhere mentioned his having seen the object at the same time as the star, or as well as the star, consequently that his circle-reading may have really applied to the latter. From Prof. Watson's official report on his observations, just published with many others, by the Superintendent of the Naval Observatory at Washington, it appears that this objection is no longer valid. Prof. Watson writes: "Between the sun and θ Cancri, and a little to the south, I saw a ruddy star whose magnitude I estimated to be 4½. It was fully a magnitude brighter than θ Cancri, which I saw at the same time, and it did not exhibit any elongation, such as might be expected if it were a comet in that position. The magnifying power was 45 and the definition excellent. My plan did not provide for any comparison differentially with a neighbouring star by micrometric measurement, and hence I only noticed the relation of the star to the sun and θ Cancri." It is difficult to understand how the observation can be explained, except by admitting the existence of an unknown body in the vicinity of the star, or by imputing to the deceased astronomer a want of *bona fides*, for which we do not believe there is the slightest excuse; he was too well known and respected to allow of such an imputation.

The solar eclipse of May 17, 1882, will afford the next opportunity of repeating observations of the kind made by Prof. Watson in 1878, but the duration of totality will nowhere exceed 1m. 48s., and in the most accessible portion of the central line will amount to 1m. 15s. only.

THE TRANSIT OF MERCURY, NOVEMBER 7, 1881.—With the positions of the Sun and Mercury given in the *Nautical Almanac* from Leverrier's Tables, and the diameters of those bodies obtained by the same astronomer from the discussion of former transits, the following will be the geocentric Greenwich times and the reduction-formulæ for the internal contacts during the transit of Mercury on November 7 in the present year:—

First internal contact, Nov. 7, 10h. 18m. 15s. $+ [1^{\circ}42'05] r \sin l$
 $- [1^{\circ}54'04] r \cos l \cos (L + 55^{\circ}34'2)$
 Last internal contact, Nov. 7, 15h. 35m. 28s. $+ [0^{\circ}91'36] r \sin l$
 $+ [1^{\circ}63'02] r \cos l \cos (L - 35^{\circ}23'2)$.

Where r is the radius of the earth at the place, l its geocentric latitude, and L the longitude from Greenwich, reckoned towards the east. The quantities in square brackets are logarithms of seconds of time.

It will be seen that the transit will be invisible in this country, and will be best observed from the Australian observatories. At the Cape of Good Hope the sun will not rise till about four minutes after the second internal contact has taken place. At Madras he will be above the horizon before the middle of the transit, which ends there about 20h. 59m.

As an example of the use of the above formulæ we may compute the local mean time of first internal contact for the Observatory at Melbourne. The longitude of this observatory is 9h. 39m. 54s. 8 E., or in arc $144^{\circ}58'7$, and the geographical latitude is $-37^{\circ}49'9$. From Bessel's Table in the *Berliner Jahrbuch* for 1852, we find $\log. r = 9.9999$, and the reduction of latitude, $11'1$, so that $l = -37^{\circ}38'8$.

Constant + $1^{\circ}42'05$	Constant + $55^{\circ}34'2$	Constant - $1^{\circ}54'04$
$r \dots \dots 9.9999$	Long. $\dots \dots 144^{\circ}58'7$	$r \dots \dots 9.9999$
$\sin l \dots \dots -9.7859$	$A \dots \dots 200^{\circ}32'9$	$\cos l \dots \dots +9.8986$
-1.2063		$\cos A \dots \dots -9.9715$
$-16s.08$		$+1.4104$
		$+25s.73$
		$-16s.08$
		$+9s.65$
	Geocentric time $\dots \dots 10 \ 18 \ 15.8$	
	G.M.T. $\dots \dots 10 \ 18 \ 25.5$	
	Longitude E. $\dots \dots 9 \ 39 \ 54.8$	

Melbourne mean time 19 58 20.3

A NEW COMET.—The Smithsonian Institution telegraphs the discovery of a comet by Mr. Lewis Swift on the morning of the 2nd inst. in the constellation Andromeda; motion slow, southwards.

GEOGRAPHICAL NOTES

WE understand that the Council of the Geographical Society have recently voted a contribution of 100*l.* towards the expenses of the Palestine Exploration Fund's Expedition to Eastern Palestine.

THE May number of the Geographical Society's *Proceedings* contains Mr. James Stewart's paper on Lake Nyassa and the water-route to the lake-region of East Africa, with a map of the north end of Nyassa. A note afterwards given embodies recent information from Livingstonia as to a serious depression in the level of the lake, which threatens to make the south end, as well as the Upper Shiré, unnavigable, and by consequence detract very seriously from the value of this route. Col. Tanner's paper on Kafiristan is also given, with a map of that and the adjacent region. Some account is furnished of Dr. Junker's journey in the Nyam Nyam country from the traveller's letters to Dr. Schweinfurth and Signor Gessi. Reference is again made in the Geographical Notes to the late Capt. Wybrants' expedition to South-East Africa, but complete details of its disastrous ending are still wanting, which seems the more remarkable as the lamented leader died as far back as November 29, 1880. An interesting note deals with Dr. Kirk's recent visit to the Dar-es-Salaam district of East Africa, and it is also stated that the Rev. T. J. Comber is about to make another attempt to reach Stanley Pool by the Makuta route, while one of his companions will follow the line of the Congo. The remaining notes refer to Major J. Biddulph's work on the tribes of the Hindu Kush, and Père Desgodins' labours in the cause of geography on the eastern and southern frontier of Tibet.

AT the evening meeting of the Geographical Society on Monday next Mr. E. Whympers will read a paper describing the geographical results of his journey among the Andes of Ecuador.